Modifying self-blame, self-esteem, and disclosure through a cooperative cross-age teaching intervention for bullying among adolescents

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Abstract

Bullying is common among school students, and some victims hold self-blaming attributions, exhibit low self-esteem, and do not seek social support. A wait-list control pre/post-test experimental design, with random allocation, was used to assess the effects of a novel cross-age teaching of social issues intervention (CATS) on the latter three variables among peer-identified victims of bullying (N = 41, mean age = 14.5 years). In small co-operative groups of classmates, participants designed and delivered a lesson to younger students that informed them that bullies not victims are in the wrong, victims have no reason to feel bad about themselves and that seeking help can be beneficial. CATS led to a significant improvement on all three dependent variables with mostly large effect sizes, these positive effects were even stronger with a bigger dose of intervention (six versus four hours), and changes in self-blame, and separately changes in self-esteem, mediated the positive effect of the intervention on help-seeking. The theoretical and practical implications of these results were discussed, especially in terms of supporting a highly vulnerable sub-group of adolescents.

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Peer bullying is deliberate and maliciously motivated physical, verbal and psychological aggression that persists across time and involves a power imbalance in favour of perpetrators (Olweus, 1993). Around a third of young people report being a victim of peer bullying (victims henceforward), with 10-14% being bullied chronically for at least six months (Wolke, Lereya, Fisher et al, 2014; World Health Organization, 2012). They often suffer a range of negative effects including depression, anxiety, loneliness and poor quality social relationships (Hawker and Boulton, 2000; Kim and Yun, 2016; Wolke and Lereya, 2015; Zhu and Chan, 2015). Given these findings, and the fact that anti-bullying efforts have had only limited success (Merrell, Gueldner, Ross and Isava, 2008; Ttofi and Farrington, 2011), bullying among adolescents is widely regarded as a pressing public behavioral and mental health concern (e.g., http://www.stopbullying.gov). Many anti-bullying interventions have been developed and tested in the UK (Vanninin et al, 2011) and elsewhere (Nocentini, Zambuto and Menesini, 2015).

Significant associations between victimization and self-esteem have been reported (Nansel, Overpeck, Pilla, Ruan, Simons-Morton and Scheid, 2001; Hawker and Boulton, 2000; Troop-Gordon and Ladd, 2005). They appear to be reciprocally related over time, and calls to help raise victims' self-esteem have been made (Boulton, Smith and Cowie, 2010; Salmivalli and Isaacs, 2005). Several studies have obtained gender differences in self-esteem and in its links with victimization and other social adjustment variables (Boulton, 2005a; Boulton et al, 2010; Harter, 1985). Moreover, gender differences have been reported for other facets of bullying-related issues (Seals and Young, 2003), so much so that Safran (2008) argued that researchers should always test for them.

Scholars trying to account for associations between social stressors, including victimization, and maladjustment have used attribution theories (Weiner, 1986). Goetz and Dweck (1980) drew a distinction between victims' perceptions of internal versus external causes, with only the former reflecting personal responsibility. A number of scholars have theorised that difficult social and life experiences may be associated with increased self-blame for mistreatment by others (Garety, Kuipers, Fowler, Freeman and Bebington, 2001; Janoff-Bulman, 1979; Morrison, 2001). Graham and Juvonen, (1998) and Shelley and Craig (2010) reported significant correlations between victimization and self-blame among school students, as did Boulton (2013) with adults. Boulton (2013) also found that self-blame (partially) mediated the association between childhood victimisation and adult social anxiety, and he called for interventions to help victims, "challenge and change any such maladaptive self-blaming appraisals they may have about the causes of their torment" (p.15).

Many young people do not tell anyone that have been bullied and hence they often lack social support (Boulton et al, 2013; Cowie, 2000; Hunter, Boyle and Warden, 2004). Students seem especially reluctant to disclose being bullied to teachers (Boulton, 2005b; Naylor, Cowie and del Ray, 2001). Left on their own, some non-disclosing victims may become enmeshed in an ongoing cycle of more victimization and distress (Boulton et al, 2010; Salmivalli and Isaacs, 2005).

Girls tend to be more likely than boys to seek help for bullying (Boulton, 2005b; Hunter et al, 2004; Naylor et al, 2001). Hunter et al (2004) also found that girls were more likely than boys to regard social support, which requires disclosure, as being the best strategy for stopping bullying and for helping them cope with any negative feelings. Clearly, it is important to examine the moderating role of gender in relation to (non)disclosure.

Based on the above body of theoretical and empirical work, it is clear that victims may be prone to manifest low self-esteem, inappropriately blame themselves, and fail to disclose their negative peer experiences. As such, they represent some of the most vulnerable students in schools and require our attention and support. But the question of what form that support could, or indeed should, take is far from being answered. It is to this issue we now turn.

It is vital that efforts to support victims minimise the possibility that any current negative self-beliefs can be hardened (Otani, 1989; Tormala and Petty, 2002). While there is some evidence that students value teachers' anti-bullying efforts (Crothers, Kolbert and Barker, 2006), contrary findings have also been reported (Boulton and Boulton, 2011; Rigby and Bradshaw, 2003). Teachers themselves often report feeling ill-equipped to deliver anti-bullying interventions (Boulton, 2014) and this is likely to be all the more so when it comes to supporting highly vulnerable and perhaps distressed victims. Moreover, the evidence supporting the use of direct interventions in victimization by adults is largely equivocal (Ttofi and Farrington, 2011), and some studies have failed to find any positive effects of adult-delivered interventions in many groups of students (Hunt, 2007).

Peers offer an alternative source of social support and this most often takes the form of some kind of structured peer support/counselling system (Boulton, Trueman and Rotenberg, 2007; Cowie and Olafsson, 2000). Evaluations understandably focus on the effects on victims who use these services and there is growing evidence that they can help victims cope better with the distress of being bullied (Cowie, 2014). However, some adolescent victims said they would not use their schools' peer counseling for bullying service because they were fearful of being stigmatized (Boulton, Trueman et al 2007; Fox and Butler, 2007). In terms of what victimized students *do* want, Boulton, Trueman et al (2007) found that one in five said it was important that their schools' peer counseling for bully service enabled them to feel better about themselves and their situation. Similarly, peer counseling sessions were

perceived to be especially helpful when they enabled victims to maintain positive self-regard in the face of bullying (Boulton, Trueman and Rotenberg, 2007).

Taken together, this body of work suggests that some kind of *indirect* victim support that does not identify individuals as victims, leave them open to feeling that they could be stigmatized or inadvertently increase their distress, and that simultaneously helps boost their self-esteem, is warranted. Promising candidates are co-operative learning and peer tutoring. By engaging in these activities, young people might benefit personally, and we now consider reasons to support this notion.

Role theory posits that acting in a teaching role might encourage adolescent tutors to 'take responsibility' for the learning of their tutees and in doing so internalize themselves the taught material (Biddle, 1986). Most studies have focused on the effects of co-operative learning and peer tutoring on academic outcomes (for reviews see Spencer, 2006; Topping, 2005) but some have found they also may benefit self-esteem and related outcomes for tutors (Rohrbeck, Ginsburg-Block, Fantuzzo and Miller, 2003). Moreover, there is also a compelling theoretical rationale for an indirect intervention that has victims working co-operatively to tutor (younger) school mates. Cognitive dissonance theory in both its original (Festinger, 1957) and updated (Harmon-Jones, 2000) form posits that an unpleasant state of dissonance arises when people hold beliefs, feelings, etc. that are inconsistent with each other and with their overt behavior. This is thought to motivate them to let go of, or change, one or other ‘mental element’ and/or change their actual behavior so that consistency can be restored. Harmon-Jones, Peterson and Vaughn (2003) showed that people can be enabled to change their self-beliefs and behavior on the basis of experimentally-induced emotions and thoughts about their past actions and beliefs. This notion has clear similarities with the concept of cognitive restructuring which is a changed way of thinking about the self and the social world. It is an essential element in (most) cognitive-behavioral therapies. A key issue, of course, is how restructuring may be engendered (Cougle, 2012). As we argued above, victims should be treated with considerable compassion, and interventions should minimise any possibility that their current negative self-beliefs can be hardened. This becomes all the more important given that scholars are increasingly aware of the need to ‘judge’ interventions in terms of how ‘aversive’ they are to potential clients (Cougle, 2012). This further supports our decision to employ an *indirect* form of support for victims, i.e., one that does not single them out as needing 'special treatment'. Collectively, this work suggests that the act of co-operatively preparing and giving a lesson to younger school-mates that includes the notions that it is not appropriate to blame oneself for victimisation, or to feel bad about oneself when it does happen, may cause adolescent tutors to reflect on those notions generally and, in turn, *change those beliefs about themselves*.

Moreover, and importantly, cognitive dissonance theory also provides a theoretical rationale for the possibility that any changed self-beliefs might, in turn, impact upon (mediate) victims' willingness to disclose that they have been bullied. Further support for this possibility comes from Harter's (1987) theory of self-esteem which similarly sees self-esteem, and also by implication inappropriate self-blame for negative events, as having the potential to mediate between a broad range of (challenging or supporting) life situations and positive, adaptive behavior. We think it is reasonable to apply this formulation to disclosure of victimization. In that sense, the fact that self-esteem (Dishman, Hales, Pfeiffer, Felton, Saunders, Ward, Dowda and Pate, 2006) and self-blame (Boulton, 2013; Graham and Juvonen, 1998; Kim, Jackson, Conrad and Hunter, 2008) have been shown to act as mediators between a broad range of predictor variables and outcomes is telling.

That there are so many adolescent victims of bullying within the school system, many of whom do not disclose this and so are never referred on, means that only a small proportion will or indeed could be accommodated within statutory and/or specialist mental health provision. These services often struggle to cope with demand and have waiting times of several months (e.g., Crewe 0-16 Child and Adolescent Mental Health Service, 2016). While the distress of some victims might not be severe enough to warrant such specialist support, it could still affect other aspects of their lives such as ability to concentrate in class (Boulton, Trueman, and Murray 2008). That so many victimized adolescents go unnoticed and unsupported is brought in to sharp relief by those individuals who take their own lives as a direct result of being bullied (Goldblum, Espelage, Chu and Bongar, 2014; Hinduja and Patchin, 2010). Clearly, a strong case can be made for a community-based intervention to support so many potentially very vulnerable young people. School is an obvious context in which to deliver this, not least because it is where so much bullying happens. Given this, and given their prominent role in the lives of school students, teacher have been recognized as an important front line source of support for victims (Casas, Ortega-Ruiz and Del Rey, 2015). But for teachers to be able to provide such support, victims need to go to them for help. As we noted above, many choose not to. Moreover, early teacher support may pre-empt the need for some victims to require help from statutory and/or specialist mental health services, freeing the latter up for those who do.

Identifying the minimum level of an intervention, especially a novel one, that can demonstrate desired outcomes is important (Boulton, 2014; Cougle, 2012; Zhai, Raver, Jones, Li-Grining, Pressle and Gao, 2010), not least because school leaders want to minimise the time students are taken away from the academic curriculum. Guided by previous studies with student victims of bullying that had targeted similar variables to those we employed (Fox and Boulton, 2003), we tested a viable minimum level of circa four hours, and also the effects of an extra two hours. If positive effects can be demonstrated after such

relatively short durations of an intervention, the intervention is likely to be attractive to schools (Boulton, 2014). This is not a trivial consideration because some interventions to tackle bullying, including supporting victims, require a considerable investment in terms of time on the part of schools (Kärnä, Voeten, Little, Alanen, Poskiparta and Salmivalli, 2013) that some are not able or willing to make (Boulton, 2014).

In summary, the present study provided the first evaluation of an empirically and theoretically based novel co-operative cross-age teaching intervention to support peer-identified victims of bullying. This intervention, called here CATS (see below), was designed to be an indirect and hence non-aversive, threatening or stigmatizing method for bringing about restructuring of self-beliefs. The specific aims were to: (1) assess the impact of the intervention on participants' self-esteem, self-blame, and behavioral intentions to disclose being bullied; (2) test if a higher 'dosage' of intervention (six hours versus four hours) would lead to even greater benefits; (3) test if changes in self-blame and/or self-esteem could explain (mediate) the positive effects of the intervention on disclosure (if found), and (4) test if gender moderated any of these direct and/or mediation effects.

Method

Participants, Measures and Data Collection Procedure

Following approval by the local ethics committee, parental and/or head teacher permission was solicited for students in 12 Year 9 and 10 classes (N = 312, mean ages = 14.5 and 15.5 years) drawn from three secondary schools in the UK. The permission rate was 97% and all students with permission agreed to take part. All of these 312 students took part in the CATS activities, but the results we present in this paper come from only the 41 students that met our selection criteria, i.e., they were peer-identified victims (see below) who scored in the 'least desirable' quartile on self-esteem, self-blame and disclosure.

Given what we have stated about the central importance of not doing anything that could make our participants feel 'different' by targeting them in any way, we did not implement the intervention with any 'pull out' groups. Rather, our participants experienced it in exactly the same way as, indeed alongside, their peers. At no point was it even hinted that it might be especially relevant to them, and their own victimization or negative self-beliefs were not mentioned by the researchers. Moreover, and importantly, the invitation to take part in the study emphasized that it was being carried out to see if the younger tutees could be helped to learn important things about bullying through experiencing their lesson (see below).

Prior to data collection, the nature of the study was explained. It was stressed that students were not being tested, that there were no right or wrong answers, and that they could withdraw (and re-join) fully or partially without having to give a reason at any time. During assessments, each student was given a personal questionnaire and a researcher

read out the items. They were encouraged to keep their responses private and to respect the privacy of their peers.

Peer victimization. Using existing protocols (Fox and Boulton, 2006), students were presented with a list of classmates and asked to identify who was a victim of physical, verbal, relational, and social exclusion bullying. Definitions were provided. Those who received at least 33% nominations on at least one form of bullying were classified as victims.

Self-blame for victimization. This was assessed with Arazi's (2003) 10-item measure of self-blame for peer victimization, example item: "If I was bullied by another student at school, it would be because I deserve it". Response options were "True for me, A bit true for me, and Not true for me", scored from 3 to 1, respectively. As in Arazi's (2003) study, principal components analysis confirmed a uni-dimensional structure at the three times of testing (minimum eigenvalue = 2.67, minimum variance accounted for = 27.7%), and internal reliability was high (minimum alpha = .82). Hence, an overall total Self-Blame score was computed (capitalized first letters indicated measured variables below), range from 10 to 30. Higher scores indicate more self-blame.

Self-esteem. We used the global sub-scale of Harter's Self-Perception Profile for Children (1985). As in previous research (Boulton et al, 2010; Harter, 1985), at all times of testing these items exhibited a uni-dimensional structure (minimum eigenvalue = 3.64, minimum variance accounted for = 39.4%), and internal reliability was high (minimum alpha = .88). An overall total Self-Esteem score was computed, with a possible range from 6 to 24. Higher scores indicate higher Self-Esteem.

Disclosure of victimization. Following Arazi (2003), this was assessed with two items: (1) "If a student at school bullied you, how often would you tell a teacher?" and (2) "If a student at school bullied you, how often would you go to a teacher for help?". Response options were "Not at all, A bit, and A lot", scored 1 to 3, respectively. They were highly correlated at all times of testing (mean r = .91, all p < .01) and so their total was used as the Disclosure score, with a possible range from 2 to 6. Given that disclosure is such a discrete entity, other researchers have defended measuring it with few items (Rossiter, 2002).

Satisfaction. This was assessed at the end of the study with three items, all rated on a 0-10 scale; "How much would you like to give another CATS lesson in the future?", "How much did you enjoy doing CATS?", and "How much would you recommend CATS to other young people?" Responses were highly correlated (mean r = .89) and so an overall mean Satisfaction score was computed. Higher scores indicate higher satisfaction.

The Intervention and Experimental Design

All students in participating classes that contained our participants were invited to work in small groups of about five people to design a lesson about bullying (and other related matters, not reported here) and to deliver that lesson to a small group of younger students.

Students were allowed to form their own groups and encouraged to stay within them for the duration of the study. However, the latter was not enforced so as to allow individuals to change groups part-way through if that was desired. This would minimise a risk of bully-victim pairs ending up working in the same group. We called the intervention "CATS – cross-age teaching of social issues". We stressed that this was an important task because the information they would be asked to address in their lesson could help the younger students in important ways, and that they might actually enjoy taking part and themselves learn useful things. Indeed, given that students are often resistant to adult-implemented anti-bullying initiatives (Boulton and Boulton, 2011) we wanted to engender a sense of fun and ownership of their lesson in way that complemented their sense of responsibility. Students were informed that we would provide help and support in terms of the required content, how to plan, test and deliver a lesson, but that the details would be left to them. Our aim was to strike a balance between being suitably supportive on one hand and leaving them to take ownership of their lesson on the other.

We employed a range of resources and approaches to ensure that tutors had covered the 'key facts' about bullying in their lesson. The latter are presented in Table 1. For example, in helping them understand "*What bullying is and the forms it may take",* we used video clips to illustrate physical, verbal, social exclusion, cyber and other forms of bullying, and an associated PowerPoint presentation drew their attention to the defining features of bullying, i.e., repetition, intentions to cause harm/distress and power imbalance in favour of perpetrators. Students had four 60-minute sessions to prepare their lesson in the first implementation of the intervention. Each group of CATS tutors then delivered a circa 40 minute lesson to a small group of Year 7 students (mean age = 12.5 years).

This study employed a wait-list control experimental design, and 20 participants (equal number of each gender) were randomly allocated to the initial intervention group and 21 to the wait-list control group (11 girls). The members of the initial intervention group experienced the initial intervention (four hours of preparation followed by delivery of their lesson) between the first two assessment times (T1 and T2) that were separated by a circa three week gap. Then they had two further 60-minute sessions to continue working on their lesson to refine it ahead of a further delivery, called the extra dose, followed by a third assessment (T3), two weeks after T2. Similar kinds of activities were used as described above, but we encouraged the participants to think more deeply about the bullying-related issues previously raised, to refine their lesson and its content. Participants in the wait-list control group continued with their normal school activities between T1 and T2, and then they received the initial intervention between T2 and T3.

Plan of Analyses

Inferential statistical analyses assume independent data from each student. This may be violated for some participants since CATS was conducted within small groups. However, most of the CATS groups contained only one of our participants working alongside students who did not meet our inclusion criteria, and hence the potential for 'cross-contamination' *within our sample* was small. We considered employing multilevel analyses with random effects for school, class and CATS group but chose not to do so since the estimates would have been inherently unstable given the small numbers. Moreover, there was some movement of participants across the CATS groups during the study that would have violated the assumption that groups were themselves independent. For these reasons, we employed analysis of variance (ANOVA) tests, with a Greenhouse-Geisser correction applied when Mauchley's test indicated a violation of the sphericity assumption, and post-hoc t-tests to determine if the intervention did or did not have statistically significant effects on our variables. We also calculated effect sizes since these provide an index of the relative size of an experimental/intervention effect and allow comparisons across studies and interventions (Thalheimer and Cook, 2002). We measured both within-group and between-group effect sizes. The latter utilized Cohen's *d*, i.e., the difference between the means of the initial intervention and wait-list control groups was divided by the average of the standard deviation of those two means (D'Amico, Neilands and Zambarano, 2002). Cohen (1988) suggested effect sizes 0.20 to.49 be deemed small, those between.50 and .79 deemed medium, and those ≥ .80 deemed large. Within-group effect sizes were calculated with Morris and DeShon's (2002) Equation 8 to control for correlations between pre-and posttest scores. They noted that when these correlations are large, effect sizes may also be large, and certainly larger than if such a correction was not applied.

Results

Effects of the Initial Intervention

Mean (and standard deviation) scores for the three dependent variables are presented in Table 2. For each one, a 3 (Time, repeated measures: Time 1, 2 and 3) x 2 (Group: initial intervention versus wait-list control) x 2 (Gender) mixed ANOVA was employed. None of the interaction effects involving Group and Gender was significant, and so Gender was eliminated, leaving a more parsimonious 3 (Time, repeated measures) x 2 (Group) design. The Time x Group interaction effect was significant for all three dependent variables: Self-Blame, F (2, 78) = 14.94, p < .001, partial eta squared (η^2) = .28; Disclosure, F (2, 63.24) = 13.83, p <.001, η^2 = .26; and Self-Esteem, F (2, 50.77) = 13.10, p < .001, η^2 = .25. Post-hoc t-tests to reveal the nature of the interaction effect for each dependent variable are presented in Tables 3 and 4. That the initial intervention had a positive effect was shown by a number of findings: (1) while the groups were initial similar on all three dependent variables at T1,

they differed in the predicted direction at T2, (2) whereas the wait-list control group did not show a significant improvement from T1 to T2 (with no CATS in between) on any dependent variable, the initial intervention group (with CATS in between) did show a significant improvement from T1 to T2 on all three dependent variables, and (3) among the wait-list control group, there was a significant improvement across all three dependent variables between T2 and T3, and between T1 and T3, during which time this group received the initial intervention.

Effects of a Higher Dose of Intervention

To test if the initial intervention group benefitted from the extra dose of intervention, two sets of analyses were carried out. In one set, repeated measures t-tests compared their scores at each combination of times (see top half of Table 4). Across all three dependent variables, scores at T3 (i.e., after they had experienced the extra dose) were significantly higher than at T2, and significantly higher than at T1. In the second set of analyses, the initial intervention group's scores at T3 were compared with those of the wait-list control (see Table 3, right hand column), when the former but not the latter had experienced the extra dose. Across all three dependent variables, scores for the former were significantly higher. Together, these results attest to the extra benefits of a higher dosage of intervention.

Effect Sizes

Between-group effect sizes are shown in Table 3. They were medium for Disclosure at T2 and T3, and (very) large for both Self-Blame and Self-Esteem at T2 and T3. Within-group effect sizes are shown in Table 4. Those for the initial intervention group were medium in the T2 to T3 comparison for Self-esteem, and (very) large in all other cases. For the wait-list control group effect sizes were medium in the T1 to T3 comparison for Disclosure, and (very) large in all other cases.

Satisfaction

Across the sample as a whole, very high levels of satisfaction with CATS was reported (mean = 8.88, SD = .32). No significant gender or group difference was evident.

Testing if Changes in Self-blame and Self-esteem Mediate Changes in Disclosure

The hypothesis that the effect of the intervention on Disclosure was mediated by change (Δ) across T1 and T2 in Self-Blame, and separately, Δ Self-Esteem, was tested using the bootstrapping procedure of Preacher and Hayes (2004) with 5000 bootstrap resamples. Here, mean centered group (i.e., initial intervention versus wait-list control) was the predictor variable, Δ Self-Blame, and in a separate analysis Δ Self-Esteem, was the proposed

mediator, and Δ Disclosure (again, across T1 and T2) was the dependent variable. We obtained Δ scores for each variable by regressing each one's T2 scores onto its corresponding T1 scores, as recommended elsewhere (Prochaska, Velicer, Nigg and Prochaska, 2008). The indirect effect of group on Δ Disclosure through Δ Self-Blame was significant, point estimate = .601 (95% CIs = .167 and 1.144), as it was through Δ Self-Esteem, point estimate = .953 (95% CIs = .511 and 1.546). Path coefficients (unstandardized) are shown in Figure 1. If the path from predictor to dependent variable that was originally significant became non-significant after the intervening variable was included in the model (values in brackets in Figure 1), this was taken as indicating full mediation, but if this path remained significant then this was taken as indicating partial mediation, alongside the aforementioned evidence for indirect effects from the bootstrapping tests (Baron and Kenny, 1986). Δ Self-Esteem acted as a full mediator, and Δ Self-Blame acted as a partial mediator. We also tested if these mediation relationships were themselves moderate by gender using the procedure of Preacher, Rucker and Hayes (2007) but neither were.

Discussion

This study tested the effects of a novel co-operative cross-age teaching intervention, CATS, on adolescent victims of bullying. After designing and delivering a lesson that addressed some specific bullying-related themes to younger students, participants manifested a statistically significant increase in willingness to disclose being bullied and in self-esteem, and a significant decrease in self-blame. These changes were not apparent in the wait-list control group until they had experienced CATS. Between-group and within-group effect sizes were mostly (very) large using Cohen's (1988) scheme (i.e. well in excess of .80), or else medium. Such large effect sizes reflect the likely practical value of an intervention to users. So far as we can tell, this is the first test of this approach to supporting adolescent victims on these variables. Our results are especially encouraging in the context of the somewhat limited findings concerning anti-bully interventions more generally (Merrell et al, 2008; Ttofi and Farrington, 2011), although few of those focused on supporting victims *per se*. While previous studies have shown that peer support that takes a 'traditional' one-to-one counseling (i.e. non-teaching) form can benefit victims of bullying, the evidence is often equivocal and/or based on non-experimental designs that measure the 'success' of an intervention with students' self-reports that may be open to social desirability bias (Boulton, Trueman and Rotenberg, 2007; Cowie and Olafsson, 2000).

The design of our study allowed us to test two different dosages of CATS. We demonstrated significant benefits after the initial dose of four one hour CATS sessions plus delivery of the lesson, and extra significant effects of a further two one hour CATS sessions.

Effect sizes for both doses were mostly (very) large, well in excess of .80, or else medium. This indicates adolescent victims experiencing CATS may derive meaningful benefits after the initial *and* the extra dose. The issue of dosage is far from trivial since 'too little intervention' will, by definition, not bring about the desired effects, and extra doses that have few extra benefits are wasteful and unlikely to be well-received by school leaders and teachers focused on delivering the formal curriculum under time constraints (Boulton, 2014; Cougle 2012). We think both our initial and the extra doses are reasonable ‘asks’ of school managers, even in situations where time is especially at a premium.

The value of our study to the literature on supporting adolescent victims of bullying is not restricted to showing that CATS can bring about improvements in self-esteem and self-blame beliefs since we also found that these changes *mediated* a greater willingness to disclose being bullied. Given that so many victims do not tell anyone and so are denied emotional and/or instrumental social support (Boulton, 2005b; Cowie, 2000; Hunter and Borg, 2006; Hunter et al, 2004), this is an especially important change in behavioral tendencies (but see below). So far as we can tell, prior to our study there was an absence of knowledge in the literature regarding *mechanisms* through which interventions may help victims. Our finding that ‘re-calibrated’ self-beliefs acted as a mediating mechanism is consistent with prior theories, including cognitive dissonance theory (Harmon-Jones et al, 2003) and self-esteem theory (Harter, 1987), and consistent with empirical data derived from other variables (Boulton, 2013; Dishman et al, 2006; Graham and Juvonen, 1998; Kim et al, 2008). This wealth of supporting work, allied with our findings that show the measurable and considerable benefits to victims of CATS, suggest that future studies could usefully test if it can, *via bringing about better self-beliefs*, foster other behavioral outcomes. Especially important in this regard would be helping victims to develop more assertiveness and a more socially confident demeanour since these aspects of behavior have been implicated as precipitating factors in victimization (Fox and Boulton, 2006; Hodges and Perry, 1999).

Gender did not moderate any of our main or mediation effects and so all of the points we make seem applicable to both genders. Our results for adolescent males are perhaps especially encouraging given that this gender has been found to solicit social support less often than girls and so may experience greater distress (Boulton, 2005b; Hunter et al, 2004; Naylor et al, 2001). One reason is thought to be that help-seeking is perceived by some young males as ‘un-macho’ (Cowie, 2000). The indirect nature of CATS, and the fact that as a tutor participants are in an 'authority' role, might be especially appealing to such boys because this aspect of their self-image is not brought into question. Future qualitative studies that ask CATS participants *why* they like engaging in it could help test these notions.

Our CATS approach to helping adolescent victims is novel in several ways, one being its explicitly indirect nature - at no point were our participants made to feel that it was targeted at them (and this was confirmed in post-study interviews and focus groups). The rationale was that this would reduce any resistance they might have since it has long been known that 'client' resistance may compromise efforts to support vulnerable individuals including victims (Boulton and Boulton, 2011; Otani, 1989). We also designed CATS to be an indirect support for victims because we did not want to do anything at all that could 'worsen' their current position via being somehow stigmatized or labeled, and that may have occurred if we had employed a pull-out design that targeted adolescents identified as 'victims' (Boulton et al, 2007; Fox and Butler, 2007). Another novel aspect of our intervention is that it is predicated on the belief that bullying-related problems are best seen within, and hence tackled with, a wider circle of students, not just adults or student bullies and victims (Salmivalli, 2010). With this in mind, our intervention involved groups of students working together and mixing with others in their own and other year groups. The strong sense of 'ownership' of the lesson material, and of responsibility for 'their' younger tutees, that we tried to instill in our CATS tutors could plausibly be one reason why they internalized the 'knowledge about bullying' and changed their self-beliefs. Again qualitative studies could test these ideas.

Our encouraging results lead us to recommend a more widespread take-up of CATS, as does the fact that it is relatively easy to implement in schools and elsewhere. Teachers could be shown how to run CATS activities with minimal instruction, and this has been demonstrated to be a key factor in their decisions about whether or not to use an intervention (Boulton, 2014). Moreover, the mean satisfaction score with CATS was 8.88 on a 0 to 10 scale. Social validity is not a trivial issue since criteria to judge interventions are increasingly including an assessment of how '(non)aversive' they are to clients (Cougle, 2012). Moreover, while the need to treat victims with compassion might be obvious to anyone with a clinical/therapeutic background, it is still noteworthy that many students have reported feeling worse after having disclosed being bullied to teachers and this probably contributes to the low incidence of reporting it to them (Boulton, 2005b; Naylor et al, 2001). Teachers often report being unsure how to deal effectively with bullying and its aftermath (Boulton, Hardcastle, Down, Simmonds and Fowles, 2014), and our intervention offers them and other adults a practical and student-centered way forward. However, it would be inappropriate to suggest that CATS is a panacea that will help all victims of bullying deal with all negative aspects of their peer experiences. In this sense, it would be helpful to regard CATS as a kind of primary prevention and early response to sub-clinical levels of distress that may arise out of peer bullying, but not something that is indicated for more

extreme cases. Nevertheless, we see value in researchers testing if CATS could help severely distressed victims but that would require guidance by a qualified clinician.

Strengths and limitations of our work warrant consideration. Self-reports of disclosure of bullying are open to bias. Future studies could measure actual rates of disclosure to provide more ecologically valid data. Nevertheless, previous studies have regarded *intentions* to disclose being victimized as important in their own right, distinct from actual disclosure (Boulton et al, 2011), not least because students' own perspectives are valuable (Hunter et al, 2004) and because behavioral intentions likely contribute to actual behavior according to the theory of planned behavior (Ajzen, 2002).

Our sample was of relatively modest size, albeit commensurate with other evaluations of novel interventions with students with peer relationship-related problems (Fox and Boulton, 2003; Young, Mufson and Davies, 2006). Moreover, the fact that effect sizes were mostly (very) large implies that power to detect those effects was not compromised by the relatively small size of the sample. Our participants were restricted to 14/15 year olds drawn from only three schools in the UK. Hence, it would be unwise to generalize too freely to victims in other contexts. Nevertheless, our results warrant further evaluations to gauge how robust they are.

We were not able to test for follow-up effects since school managers did not agree to students being taken away from the curriculum beyond the initial evaluation and intervention that were themselves in several parts. Hence, future studies should 'build into' their designs longer term assessments since any intervention whose effects are sustained can be considered more effective and will likely be taken up more frequently in schools and elsewhere (Boulton, 2014; Cougle, 2012).

Another limitation arises out of the fact that in our tests of mediation, our hypothesized mediators (changes in self-esteem/self-blame) were measured *at the same time* as our hypothesized outcome (changes in disclosure intentions). It is possible that changes in disclosure intentions could have brought about (i.e, mediated) changes in the other two variables. Although the latter seems less plausible conceptually, future studies could test between these competing possibilities by taking temporal precedence into account. Specifically, the proposed mediator(s) should be measured at a time *prior to* the measurement of the proposed outcome.

Our investigation limited its focus on to CATS tutors. Future studies could easily extend that to testing the effects of the intervention on CATS tutees. If it could be showed that CATS benefitted the two groups, albeit for different reasons, then this might make it even more attractive to schools on a kind of 'twice the bang for the buck' basis.

In its favor, our intervention has high ecological validity since it was conducted with a community sample in a community setting with participants who were engaged in a relatively naturalistic process along with their classmates. Our measures, while brief, had demonstrably good psychometric properties. Our use of an experimental design with random allocation and a wait-list control group is a further important strength, as this provides a sound basis on which to judge an intervention (Kazdin, 1998). Moreover, there were no drop-outs from our sample and so an intent-to-treat design would not have led to any advantages, such as control of type 1 error rates (Lachim, 2000).

In summary, this study found that a novel, non-threatening form of co-operative cross-age teaching had substantial beneficial effects on victims' self-esteem and self-blaming beliefs, and that those changes in turn led to greater behavioral intentions to seek social support. Effect sizes were at least moderate and most often very large. The CATS intervention requires what are likely to be considered reasonable time demands. Given the widespread incidence of bullying among adolescents, and the failure of several decades worth of effort to stamp it out, we hope our work will encourage others to consider evaluating and then using this form of community intervention to support victims, some of the most vulnerable young people within our schools and wider society.

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Table 1

Outline of the Key Facts about Bullying that CATS Tutors were asked to Address in their CATS Lessons

1. What bullying is and the forms it may take.

2. Why bullying may cause various forms of distress.

3. Some students blame themselves when they are bullied, and why this is not fair or appropriate because it is the bullies' fault

4. Some students may feel bad about themselves when they are bullied and why this is not fair or appropriate – they have not done anything wrong.

5. Some students do not tell teachers, or anyone else, that they have been bullied, and possible reasons why. The importance of telling someone when bullying happens, especially in terms of receiving help and support to stop the bullying and feeling better about oneself.

Table 2

Mean (and Standard Deviation) Scores of the Study

Dependent variable	Time 1		Time 2		Time 3	
	II	WLC	II	WLC	II	WLC
Self-blame[a]	22.2	21.7	18.1	20.9	15.7	18.4
	(4.3)	(4.1)	(3.9)	(3.6)	(4.2)	(3.5)
Self-esteem[b]	13.6	13.1	19.4	13.0	20.7	16.4
	(5.0)	(4.0)	(2.9)	(3.7)	(2.9)	(4.2)
Disclosure[c]	2.6	2.9	4.1	2.5	5.0	3.8
	(0.6)	(1.0)	(1.0)	(0.6)	(1.2)	(0.9)

II = Initial intervention group and WLC = Wait list control group.

[a]Scores could range from 10 to 30 .

[b]Scores could range from 6 to 24 .

[c]Scores could range from 2 to 6.

Table 3

Post Hoc Between Groups T-Tests to Compare Initial Intervention and Wait-List Control Groups, and Effect Sizes Following CATS Intervention

Dependent variable	Time 1	Time 2	Time 3
Self-Blame	0.33	2.37* (1.94)	2.24* (1.21)
Self-Esteem	0.29	5.97*** (2.0)	3.78*** (1.14)
Disclosure	1.17	6.06*** (0.75)	3.46*** (0.70)

Note. Values represent the t statistic, each with 39 degrees of freedom, with *d* effect sizes in brackets.

* p <.05; ***p <.001.

Table 4

Across Time Comparisons (Repeated Measures T-Tests) for the Initial Intervention and Wait-List Control Groups, and Effect Sizes Following CATS Intervention

Dependent variable	Times 1 versus 2	Times 1 versus 3	Times 2 versus 3
		Initial intervention group[a]	
Disclosure	5.26*** (1.18)	7.65*** (1.77)	4.72*** (1.09)
Self-Blame	6.44*** (1.44)	9.61*** (2.16)	5.04*** (1.16)
Self-Esteem	4.35*** (1.01)	5.35*** (1.23)	3.70** (0.79)
		Wait-list control group[b]	
Disclosure	1.43	2.98** (0.65)	5.85*** (1.42)
Self-Blame	1.57	8.67*** (1.94)	8.40*** (1.88)
Self-Esteem	0.57	5.78*** (1.27)	6.89*** (1.52)

Note. Values represent the t statistic, with Morris and DeShon's (2002) *d* effect sizes in brackets.

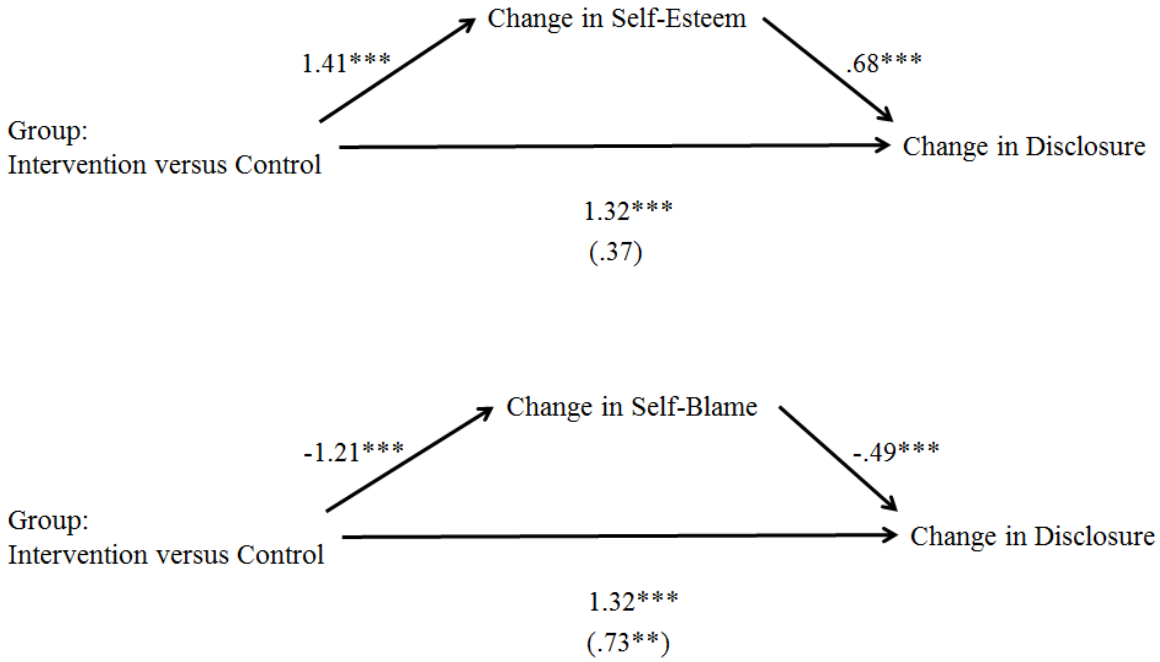
* p <.05; **p <.01; ***p <.001.

[a]T-test degrees of freedom = 19.

[b]T-test degrees of freedom = 20.

Figure 1

The effect of the intervention on change in disclosure is mediated fully by change in self-esteem (top) and partially by change in self-blame (bottom)



Values represent unstandardized regression coefficients.

In each model, the value in brackets is the indirect effect of group on changes in disclosure after the mediator has been controlled for.

**p <.01

***p <.001